Keystone Objectives for CUBA 1

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| Describe the characteristics of life shared by all prokaryotic and eukaryotic organisms |
| Compare cellular structures and their functions in prokaryotic and eukaryotic cells |
| Describe and interpret relationships between structure and function at various levels of biological organization (i.e. organelles, cells, tissues, organs, organ systems and multicellular organisms) |
| Describe the unique properties of water and how these properties support life on Earth (e.g. freezing point, high specific heat, cohesion) |
| Explain how carbon is uniquely suited to form biological macromolecules |
| Describe how biological macromolecules form from monomers |
| Compare the structure and function of carbohydrates, lipids, proteins and nucleic acids in organisms |
| Describe the role of an enzyme as a catalyst in regulating a specific biochemical reaction |
| Explain how factors such as pH, temperature, and concentration levels can affect enzyme function |
| Describe the role of ribosomes, endoplasmic reticulum, Golgi apparatus, and the nucleus if the production of specific types of proteins |
| Distinguish between the scientific terms: hypothesis, inference, law, theory, principle, fact, observation |